POPULATION CHANGES IN THE SERVICE CENTRES OF ALBERTA : 1981 - 86

Dr. W.K.D. DAVIES
Professor of Geography
University of Calgary

APRIL 1987

90-05193/

A SPATIAL ANALYSIS OF SERVICE CENTRES IN ALBERTA, 1986

PART III

POPULATION CHANGES IN THE SERVICE CENTRES OF ALBERTA: 1981-86

Dr. W.K.D. Davies
Professor of Geography
University of Calgary
APRIL 1987

OBJECTIVES

It is the objective of this study to empirically review the pattern of recent population change in Alberta's settlements over the 1981-86 period. Specific attention will be paid to the spatial pattern of the changes rather than to individual cases and to the description of the variations in the population of various grades of service centres in the province. To this end the report is divided into three parts:

(1) a comment on data sources;
(2) a descriptive analysis of the spatial patterns of population change;
(3) a descriptive analysis of the population changes in the service centre hierarchy in the province.

[Appendix A is a list of the incorporated places and their recent population changes]

No attempt has been made in this brief report to provide either policy recommendations related to these changes or to attempt a detailed quantitative explanation of the population variations. The objective has been to provide firm evidence of the presence of *spatial* variations in the changes in settlements and to investigate the effect on the service centre hierarchy previously established.

N.B. PART I Consists of the definition and spatial location of service centres in Alberta using multivariate techniques under the title: *The Differentiation of Alberta Service Centres in* 1985.

PART II Describes the changes in the commercial importance of places on the basis of the 1985 and 1977 classification of places under the title: *Commercial Changes in Alberta Service Centres: 1977-85.*

POPULATION CHANGE IN THE SERVICE CENTRES OF ALBERTA: 1981-86

SUMMARY

1. The almost universal trend of population growth in all Alberta settlements in the last half of the 1970's was replaced in between 1981-86 by a situation in which almost half (42.4%) of the incorporated settlements (cities, towns and villages) declined.

2. Considerable geographical variations in the location of these growing and declining settlements has occurred. The main zones of population growth lie in the Calgary-Red Deer - Edmonton corridor, or rather hinterlands of these centres, and in a zone north of the Hinton - St. Paul axis and extending south to Consort. In contrast a situation of marginal decline characterizes most settlements to the east of the Highway 21/23 axis.

3. The extent of growth and decline must not be exaggerated. Over two-fifths (47.3%) of the settlements in 1986 were within 5% of their 1981 values, a feature that reflects the small Alberta population increase of 5.7% over the period.

4. The geographical variations mean that there is no uniform picture of growth or decline among the grades of service centres although size does affect the changes. The Metropolitan, Regional and most of the Sub-Regional nodes showed growth, although many were within 10% of the 1981 values, whereas two-thirds of the Large Local Service Centres and Local Service Centres declined in population. In general the smaller the grade of place the greater was the range of variation in the distribution of changes.

5. These trends mean that although many of the largest service centres in Alberta have improved their position most of the smallest service centres of all are again under the threat of decline or at best stagnation - the situation so characteristic of the 1950's and 1960's.

6. These conclusions are based on the 1986 Federal *Final* Population Census results published April 13, 1987 for incorporated places: cities, towns and villages (excluding summer villages). Little reliance can be placed on the annual figures of population published by Alberta Bureau of Statistics where almost a third of the incorporated places in the mid 1980's reported identical figures over several years, thereby disguising the extent of decline.

7. All calculations for 1981 and 1986 are based on standard boundaries (on 1986 definitions as defined by Statistics Canada) to which 1981 figures have been adjusted.

POPULATION CHANGE IN THE SERVICE CENTRES OF ALBERTA: 1981-86

1. DATA SOURCES

It has always proved difficult to trace the detailed changes in the population of Alberta's settlements, certainly on a year to year basis, because accurate annual population counts on a uniform settlement basis are not available for the majority of places. The Alberta Bureau of Statistics (A.B.S.) does compile figures on an annual basis for all incorporated settlements (cities, towns and villages) but some of the information provided for towns and villages needs to be treated with scepticism. For example, a comparison of the figures reported by A.B.S. in the 1983 and 1985 publications on Alberta Retail and Service Statistics (which actually relate to the 1981 and 1983 populations) revealed that 31 out of 111 towns (27.9%) showed identical populations between the two dates. Similarly, this was also the situation characteristic of 39 out of 123 villages (31.7%). The reason for this apparent population stability is that the figures are usually self-reported by officials of the communities and is not always produced by a local accurate census. Given the practice of providing per-capita grants to incorporated settlements it is clearly not in the interest of municipalities (at a time of slow population growth in the province) to undertake the expense of a census and certainly not to report a population decline. Indeed, in view of the population decline that one intuitively knows has taken place in many Alberta settlements in recent years it is rather suspicious to find that only 5.1% of all towns and villages reported population decreases between the 1983 and 1985 A.B.S. reports. When the number of places with a decline in population is added to the larger numbers of apparently stable population it would appear that only 37 out of 111 towns or 35 out of 123 villages displayed a zero or negative population decrease, figures which this report shows to be major underestimates. The Quarterly Reviews of the Alberta Bureau of Statistics also only report population totals for 21 of the largest places. In the last quarter of 1986 this publication showed three municipalities with apparently identical populations between 1982

and 1985 and nine others with the same population in at least two of the succeeding years. Fortunately, some accurate censuses are carried out by the larger settlements and by some of the Regional Planning Authorities but the coverage is not comprehensive enough throughout the province to use the information in any systematic manner.

These data problems mean that the only really satisfactory source of demographic data for all the settlements of Alberta is the five yearly federal census in which standard and comprehensive data survey techniques are used (Statistics Canada 1987). Of particular importance is the care taken by the census to provide information on a standard areal basis between any pair of dates when the settlement boundaries have been altered. Use of these data means investigators only have a five-yearly glimpse of the dynamic situation of change; the detailed annual changes for all settlements cannot be identified. In the particular case of this report, for the changes between census day in 1981 and 1986, it must be noted that many settlements in 1981 were still growing as part of the economic boom in the province that continued into 1982. The subsequent depression, the partial reversal in 1984/85 and revived economic decline to early 1987, has certainly had an important influence on the demographic patterns of settlements but such details cannot be traced from this source. Annual estimates of population are available for the largest centres and could be used to monitor the annual fluctuations. This is *not* attempted in this study because such information is not available for all the settlements. The study, therefore, only deals with the result of the absolute and relative changes in population in the *incorporated* settlements (cities, towns and villages - excluding summer villages) of Alberta between census days in 1981 and 1986. The restriction to the incorporated settlements is necessary because data on the unincorporated settlements will not be released by Statistics Canada until October 1987. It must be noted that the incorporated settlement data used here are the final population figures of the census and were obtained soon after publication date on April 13, 1987.

2. THE SPATIAL PATTERN OF CHANGE

a) Background to the 1980's Changes

In the 1960's and early 1970's a great deal of concern was being expressed in developed countries about the continued stagnation and decline of many rural settlements: a decline linked primarily to the loss of their service centre functions in a more mobile society with decreasing farm populations. At the same time the growth of the larger nodes led to parallel worries about the explosive growth and future of the larger places. In Alberta these problems were addressed by the Task Force on Urbanization (Boothroyd 1971). However the energy industry boom of the mid and late 1970's, together with the high prices for grain crops in the same period and higher production levels, produced the jobs and additional spending which led to an unprecedented period of economic growth. This growth was aided by the expansion in government social services and administration in many centres. The result was that in most size categories and most areas Alberta settlements grew apace.

Use of the city, town, and village categorization of places - broadly a division into the three population size categories of above 10,000, 1 - 9,999 and under 1,000 in size (although there are some exceptions to these divisions in about 5% of the cases) - is not sufficiently detailed to capture the nuances of population change among the settlements. Instead, the analysis is organized in 10 categories of settlements, in size groups of 50 population, for which data are available for 1971 and 1981. The total includes unincorporated as well as incorporated places. In Alberta a clear trend of decline, (namely more declining than growing settlements in the group) was only found in the 1-49 persons category. Within the next two groups, between 50 and 149 persons, there was an approximate balance between the number of declining and growing settlements. In the 150-199 size category only 22.5% of the places showed decline over the period. This meant that the 'threshold of growth' in size category terms was quite low in Alberta. In other words, the vast majority of Alberta settlements above 150 population in

TABLE 1 ALL PRAIRIE SETTLEMENTS 1971-81
(Incorporated and Unincorporated)

Percent of Places Showing Decrease Over the Period

Category of Population Size	All Prairies % Showing Decreases	Manitoba % Showing Decreases	Saskatchewan % Showing Decreases	Alberta % Showing Decreases
1 to 49	88.16	91.11	92.25	75.93
50 to 99	67.50	73.13	78.45	47.01
100 to 149	61.54	53.13	72.22	51.92
150 to 199	51.59	63.33	66.07	**22.50**
200 to 249	50.58	62.50	54.29	35.71
250 to 299	45.21	50.00	58.06	25.00
300 to 349	**29.55**	**28.57**	53.33	6.67
350 to 399	37.70	0	53.33	22.73
400 to 449	26.83	30.77	**29.41**	18.18
450 to 499	25.81	37.50	38.46	0
500 to 999	21.64	26.53	27.85	4.65
1,000 to 2,499	16.81	24.00	26.67	4.08
2,500 to 4,999	3.70	0	13.33	0
5,000 and over	8.00	20.00	16.67	0
Number of Places with 1971 and 1981 population available	1540	184	350	525

29.55: First size category showing dominance of growth in the group i.e. > 5% from 50% level.

--- Categories between these lines show an approximate balance between the
--- number of growing and declining settlements i.e. within 10% of the 50:50 situation.

(Source: Davies, W.K.D. (1986) Unpublished work on population changes in the Prairie Provinces)

size grew during the 1970's. Incidentally this proved to be a much lower figure than the comparable data sets in Saskatchewan and Manitoba where the size categories in which unequivocal growth occurred were over 300 and over 400 respectively. These figures show that the size category in which there were clearly more growing than declining places for the 1971-81 period proved to be much lower than that reported by Hodge and Qadeer's (1983) in their national survey of small towns in Canada for the first part of the decade. For example 44.5% of the Alberta towns and villages were shown to have declined between 1971 and 1976 (Hodge and Qadeer 1983, p. 39). For Canada as a whole there seemed to be an approximate balance (within 4%) in the numbers of growing and declining towns and villages in the four categories up to the 300-500 category. The 501-1000 population group had 47.2% in the decline category, a figure which fell to 39.9% in the 1000-2500 category. The more detailed size categories used in Table 1 for the 1971-81 decade clearly indicates a very different situation to that reported by Hodge and Qadeer. The extent to which growth rather than decline characterized many of the smaller settlements in Alberta over the decade will continue to be underestimated if one takes Hodge and Qadeer's figures as representative of the decade.

(b) 1981-86 Changes

Detailed changes by the ten size categories of Table 1 cannot yet be shown for the 1981-86 period because data for unincorporated settlements are not available. Yet a comparison with incorporated settlements in 1976-81 can be made. Within the general decade of growth in the 1970's the *incorporated* settlements (towns and villages) of Alberta displayed quite spectacular increases during the last 5 years of the period. Between 1976 and 1981, 91.1% of the Alberta incorporated settlements grew, with only 9.1% showing a decline. Perhaps of more importance is the scale of many increases. A total of 68.6% of the incorporated settlements showed an increase greater than 10% between 1976 and 1981, compared to only 1.7% displaying a population decline greater than 10% over the same

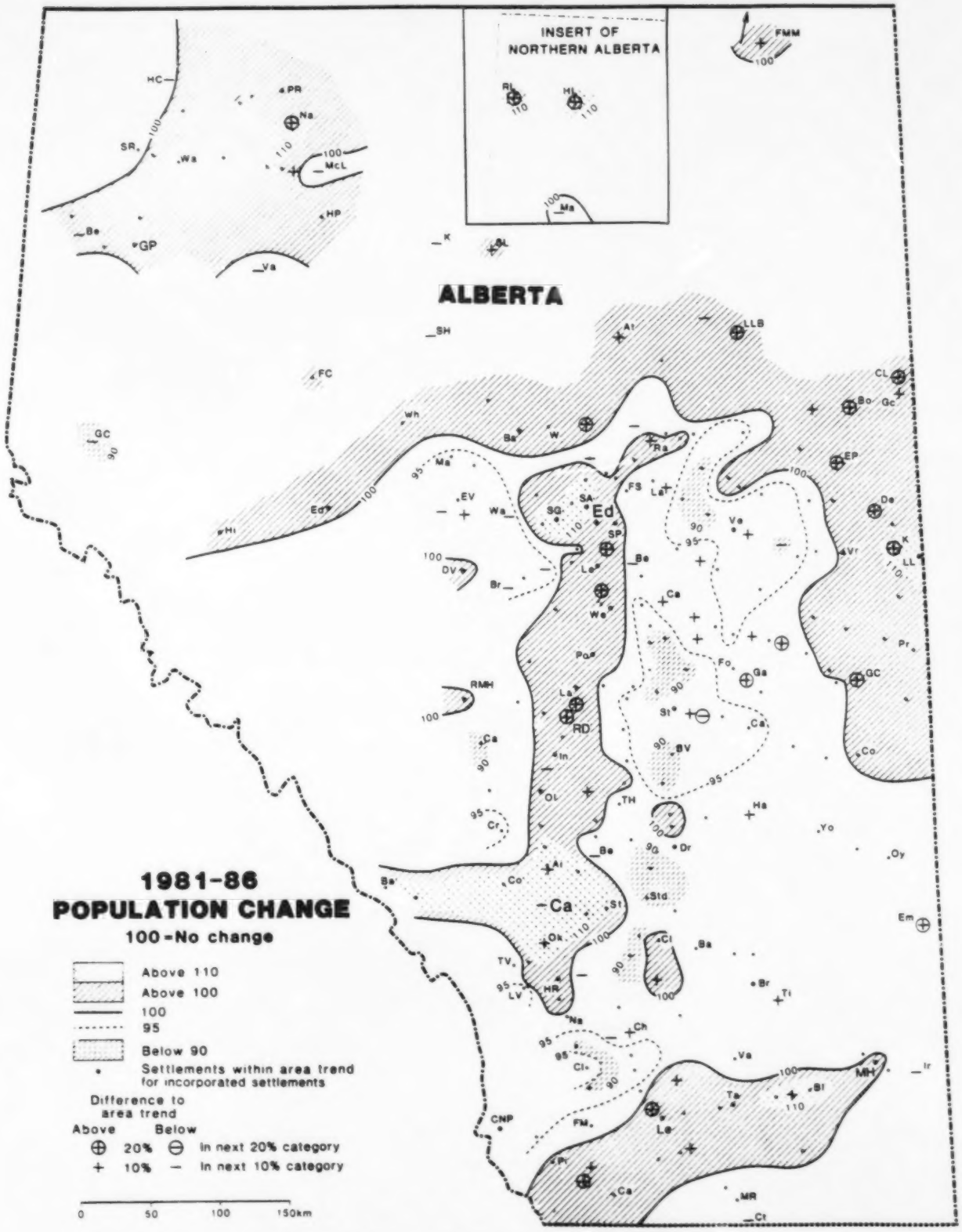


Figure 1. Population Changes in Incorporated Settlements in Alberta 1981-86

period. The contrast with the 1980's is remarkable. Between 1981 and 1986 there was an approximate balance between growth and decline, with 129 (57.6%) of the incorporated places for which data are available displaying growth, and 95 places showing decline. Nevertheless, unlike the relatively large increases in the 1970's, the scale of the change in the 1980's remains small, for 106 out of 224 places (47.3%) changed by less than 5% (25.4% with an increase and 21.9% with a decrease). Only 71 places (or 31.7% of the total) changed by values above 10% - less than half of the 1976-81 figure - but significantly with 48 or (21.4% of the total) showing increases, and 23 (or 10.3%) showing decreases. Clearly the *general* trend of population change between 1981 and 1986 among the incorporated settlements in Alberta was one of *marginal growth or marginal decline* - a pattern that fits the trend of a small (5.72%) increase in the population of the province over the 1981-86 period, compared to the 21.4% growth between 1976-81. In absolute terms this was a growth from a population of 1,838,037 in 1976 to 2,237,724 in 1981, and reaching 2,365,825 in 1986 (Statistics Canada, April 1987).

(c) Spatial Changes in Alberta: 1981-86

Figure 1 is derived from a map showing the percentage changes of population in all incorporated settlements between 1981 and 1986. Rather than showing all the individual percentage values for each place, (these are provided Appendix A), isopleths,or contours of equal value, are drawn around the places with equivalent percentage change values over the period. Diagonal shading shows the *areas* which contain settlements that have grown over the period (a value of above 100) and a cross hatch design identifies the areas where settlements have shown a greater than 10% growth. Areas containing places with values of 100 to 90 (no change or less than a 10% decrease) are shown as a blank; those with greater than 10% loss are identified by dashed lines. All settlements are identified by a single dot if they conform to the three general trends in the province: 90 to 100, or 100 to 110, or 110 to 120. If they lie in the next size band, i.e. 10% - 20% more or less than the areal norm,

they are shown by plus or negative signs, and are circled if the difference is over 20% from the general area trend.

In view of the multitude of influences that can affect the growth of settlements of such different sizes in Alberta it is, perhaps, surprising to find such consistency of spatial trends in Figure 1. Six major spatial characteristics can be identified from the map.

1. The first is the persistence of a corridor of growth along the Edmonton - Calgary axis, one that is reduced in size from that of 1971-81 and has much lower values. The area extends west from Calgary's satellites to the recreationally related growth areas in and near Banff Park. Although the area is usually described as the Calgary - Edmonton Corridor its extension north and south around these nodes demonstrates it is as much a product of the merging of the hinterlands of the two metropolitan centres as well as that of the regional centre of Red Deer lying between them. The higher growth rates of settlements in the immediate vicinity of Calgary and Edmonton testify to the continued growth of the satellite centres. The continued vitality of the nodes is not surprising given the relatively youthful, family population that moved to the centres in the whole belt in the late 1970's. It is a growth sustained by the larger nodes, by the presence of energy industries along the broad link of the Highway 2 routeway, and the deliberate decentralization of government activities to many of the towns in this area.

2. A second corridor of growth is partially linked to the incorporated settlements along Highway 3 from Medicine Hat to Lethbridge. It also encompasses settlements in the Lethbridge hinterland but includes settlements in a much broader zone to the south.

3. Another area of growth is found among most of the northern resource towns in an arc extending from Hinton through Westlock but by curving south from Vermillion to the Consort area it includes a series of agricultural service centres. Given the downturn in most economic sectors in Alberta the explanation for this growth trend

surely lies in the relatively youthful nature of the population of these northern centres which grew in the 1970's, together with the relative population buoyancy of towns in the Lloydminister vicinity and the northeastern Parkland belt along the Saskatchewan border.

4.(a) The biggest area of declining centres in Alberta during the 1981-86 period is found in a discontinuous zone running from the old coal towns of the Crows Nest Pass then east of the Highway 23/21 axis through Drumheller to Vegreville and Vilna. The area is not a continuous zone and there are occasional pockets of growth in individual centres or areas such as along Highway 13 southeast of Camrose. The general characteristic of towns and villages in this area is one of small decreases, a loss of up to 5% below the 1981 population values, although east of Red Deer and east and southeast of Edmonton are two pockets - up to 75 miles wide - of greater declines. It is hard to resist the conclusion that most of the towns of this area have little in the way of economic support other than that of their service centre role to a rural community at a time when agricultural sector incomes are increasingly depressed. The downward tendency is likely to continue in most centres unless some additional economic prop is present. Moreover, east of Red Deer these settlements lie squeezed between the low population densities of the dry belt of central and eastern Alberta, and the competition from the growing centres of the Calgary - Red Deer - Edmonton hinterlands, within which are a significantly larger number of higher order central places. It is this similar element of competition and limited growth potential in the hinterland which surely accounts for the absence of any real growth along Highway 2 south of High River, where the three centres of Claresholm, Ft. Macleod and Pincher Creek lie around the fringes of the low population density area of the Porcupine Hills. In the absence of externally generated growth, such as through new industrial activities, the service centre growth potential of the area is relatively low. These places undoubtedly cut each

other's trade in an area already vulnerable to competition from the higher order regional centre of Lethbridge to the east.

4.(b) On the east of the zone of greatest decline lies the low density population belt, the short grass, dry belt of Alberta. It is, perhaps, surprising to find that severe population declines have not taken place in the settlements of the area. However it must be remembered that there are relatively few settlements in this zone - let alone incorporated ones - so what growth there is in the area has been aggregated by the few incorporated settlements that are found. A note of caution is in order at this point. The terms growth or decline are really misnomers. Most of the settlements in the dry belt are only a few percentage points below the 1981 figures; in other words growth or decline is at best marginal. Most have, at best, remained at virtually similar population levels over the five year period.

5. Distinctive spatial patterns of change are less easy to find in the northern part of the province, in the Peace River region and along the Slave Lake. The more youthful age structures of many settlements in the area means that most of the settlements have grown over 1981-86, albeit it by small amounts, except for the more isolated places: first, between Grande Prairie and Peace River and second, in the north-west of the area.

3. CHANGES BY GRADE OF SERVICE CENTRE

Population data for 1981-86 were only available in April 1987 for the incorporated settlements. However, this does allow the characterization of change in the first seven grades of the service centre hierarchy established in 1986 (Davies 1986) in which multivariate techniques were applied to 83 commercial functions in all settlements with over three functions in 1985, a total of 376 places. Population data were available for practically all places identified in the first six grades described as: I Metropolitan; II Regional; III Sub-Regional; IV District; V Sub-District; VI Large Local Service Centres. The missing places were mainly in the national parks or in areas such as Crows Nest Pass

where population figures for the separate settlements are no longer provided. In the case of the 109 service centres in the Grade VII category (Local Service), population data were available for the 70 incorporated places (64% of the total) found in the group, ensuring that a reasonable conclusion about trends in this grade is likely to have been reached. Over 80% of the centres in Grade VIII (Minor Service Centres) were unincorporated so the trends in population change could not be accurately charted. Nevertheless, use of the seven groups provided a more detailed characterization of change than simply adopting the 'city, town and village' classification, in other words reviewing the variations by the various grades of incorporation in Alberta. It may be worth noting that all of the Grade I and II centres are 'cities', but four other 'cities' are found among the 'towns' that dominate the Sub-Regional group. 'Town' status dominates Groups III, IV, and V, although several 'villages' are found in Group V. A very small number of 'towns' are found in Grade VI, which, like Grade VII, is primarily composed of places with 'village' status.

During the 1960's and early 1970's most of the conventional wisdom on urban system population size characteristics suggested that growth is normally associated with the bigger centres and their hinterlands, and that there will be greater variability among smaller nodes - not only because most larger places are economically diverse and, are, therefore less vulnerable to rapid shifts in economic change, but because many smaller centres are often more specialized and are easily affected by such fluctuations. To some extent these generalizations were challenged from the mid 1970's onwards when counter-urbanization tendencies were recognized for the developed world (Berry 1976, Cloke 1985) and total growth was at or near replacement levels. These trends were linked to the decline in birth rates and the larger growth rates of smaller places beyond the daily orbit of metropolitan centres together with the simultaneous lower growth, or even decrease of the rates of growth of metropolitan nodes.

Table 2. Population Changes in Grades of Alberta Service Centres: 1976-86

Population Changes	SERVICE CENTRE GRADES								
	I Metro-Politan	II Regional	III Sub-Regional	IV District	V Sub-District	VI Large Local Service	VI Local Service	Numbers of Incorporated Places* (Totals)	
(a) 1976-81									
- Decreases									
>20%							1.3	1	
10-19%							3.8	3	(21)
0-09%				2.2	10.6	8.0	11.5	17	
+ Increases									
0-09%			7.1	**30.4**	17.0	20.0	**29.5**	52	
10-19%	**50.0**	16.7	**25.0**	8.7	**38.3**	**24.0**	24.4	56	
20-29∞	**50.0**	16.7	**25.0**	19.6	12.6	8.0	11.5	35	
30-39%	----	**33.3**	10.7	8.7	4.3	16.0	3.8	18	(211)
40-49%	----	16.7	21.4	15.2	4.3	8.0	2.6	20	
>50%	----	16.7	10.7	15.2	12.8	16.0	11.5	30	
(b) 1981-86									
+ Increases***									
>20%				13.3	6.3	8.3	10.0	18	
15-19.9%		16.7	10.3	6.7	----	8.3	5.7	13	
> 10-14.9%		**33.3**	10.3	4.4	10.4	4.2	5.7	17	
05-09%	**100**	**33.3**	24.2	11.1	12.5	0.0	2.8	24	(129)
0-05%		16.7	**44.9**	20.0	22.9	**45.8**	17.2	**57**	
[No. of missing places]		[1]	[1]	[2]	[1]	[5]	[39]	[49]	
- Decreases									
0-05%			10.3	**31.1**	**20.8**	20.8	**24.4**	**49**	
05-09%				11.1	14.6	8.3	12.8	23	(95)
>10-14.9%				----	8.3	----	**17.1**	16	
15-19.9%				2.2	4.2	4.2	1.4	5	
>20%							2.8	2	
(c) Median Population Change in Group: 1981-86									
Northern Alberta		112.7**	104.8	102.6	100.2	102.7	100.5		
Southern Alberta		107.9	105.2	102.8	101.2	100.5	102.1	Totals	
(d) No.of Places 1981-86									
Growing	2	6	26	25	25	15	30	129	
Declining	0	0	3	20	23	9	40	95	

* The numbers of incorporated places are those for which population data is available at both dates.

** 100 = No change 105 = 5% increase

N.B. Too few Grade VIII places are incorporated for the calculation to be representative.

*** Percentages are based on the incorporated places in Grades I to VII only (i.e. excluding the missing places) for which data is available.

In Alberta the general provincial growth pattern in the 1970's modified these general counter-urbanization trends. Given the boom in its resource economy the population grew by 21.7% between 1976 and 81. Much of this growth was associated with its two metropolitan areas, Calgary with 25.7% and Edmonton with 15.3% growth but two thirds of its regional centres grew by over 30%. It has already been shown (Table 1) that most of its smallest settlements, down to the 150 population size category grew in absolute terms. However Table 2a shows that far more of the larger centres displayed higher growth rates. Among the Regional, Sub-Regional and District places, 66.6%, 42.8% and 31.9% of centres respectively had growth increases above 30% whereas, only 21.4% and 17.9% of the Sub District and Local Service Grades had increases over 30%. The consistency of the remarkable inverse trend of higher growth rates (1976-81) being experienced by the larger nodes below the Metropolitan level is only broken by the discrepant Large Local Service (Grade VI) category, many of whom are located in close proximity to the metropolitan and regional nodes. So even though the smallest category of centres showed growth during the 1976-81 period, and possessed the highest *range* of variability (due to the number of declining centres in the Grades V and VI categories) the general trend among smaller centres was really one of limited fluctuations during the growth phase, for 69.2% of the smaller centres were within 20% of the 1976 figures.

During the 1980's the characteristics of population change among the various service centre grades have been very different from that of the preceding period. Five basic trends are apparent.

1. The most obvious is the transition to a *new phase of decline in many places in Alberta*, with 95 (42.4%) out of 224 incorporated places in Grades I to VII (for which data is available) having lower populations in 1986 than in 1981, compared to only 9.5% that lost population over the 1976-81 period.
2. When one reviews the pattern of growth of decline among the various grades of place it is clear from Table 2a that only the first three grades of centre had an

Figure 2. Trends in Population Change in Alberta 1981-86

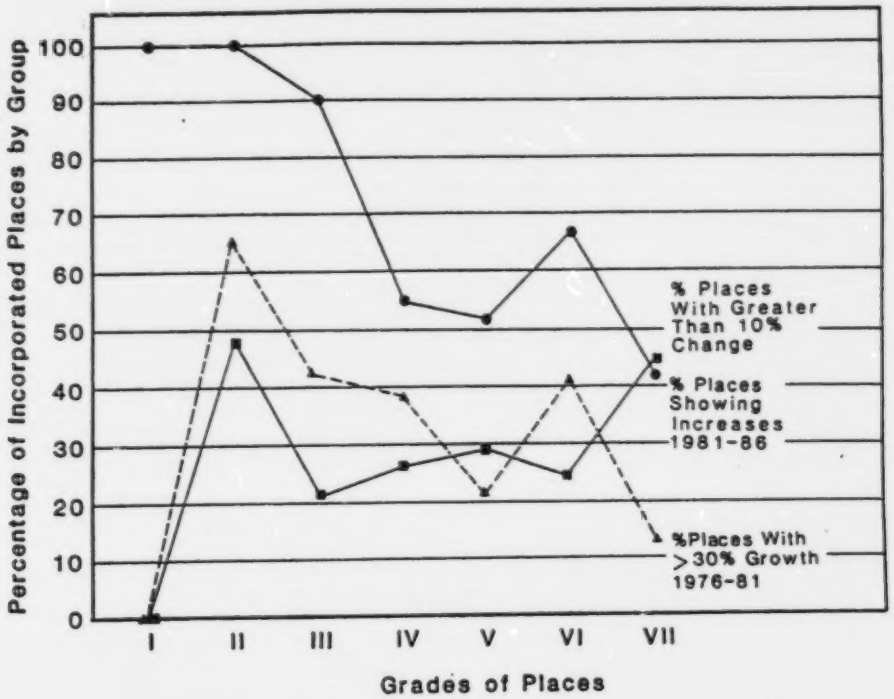


Table 3. Population Changes In Alberta Service Centre Hierarchy: 1981-86

Service Centre Grades in 1985		Percentage of Total Provincial Population in Various Settlement Grades 1981	1986	Changes in the Absolute Population Found in Each Grades of Place 1981-86
I	Metropolitan	50.71	50.90	**+6.63**
II	Regional	10.28	10.70	**+10.63**
III	Sub-Regional	8.27	8.22	+5.15
IV	District	5.79	5.88	**+6.98**
V	Sub-District	2.38	2.31	+2.90
VI	Large Local Service	0.75	0.75	+5.28
VII	Local Service	1.07	1.01	+0.39
VIII	Minor Service	N/A	N/A	
Total Grades I - VII **		79.25%	79.75%	Provincial Growth 1981-86: 5.7%
Alberta Total		100%	100%	

*Excluding 30% of the settlements that are unincorporated.
**Proportions in settlements Grade I to VII. This excludes all the minor service centre populations and the dispersed rural and rural fringe population.

unequivocal trend of more growing than declining places, although this was also partially true for Grade VI, the Large Local Service places. The discussion on the characteristics of this grade of centre (Davies 1986) has already shown that most of these places are primarily found in the vicinity of the large metropolitan and regional centres and, therefore take on the growth trends of these nodes. The District IV centres had rather more (25/40 or 62.5%) growing than declining centres, whereas the Sub-District places showed an almost balanced proportion, with 52.1% displaying growth. By contrast, 40 out of 70 (57.1%) Local Service Centres declined during the period. The conclusion must be that *the lower the grade of centre the greater was the likelihood of a decline in population between 1981 and 1986*. This may be particularly obvious in Figure 2, a plot of the percentage of places in the seven grades which have displayed growth rather than decline. Nevertheless, size category of place is not the most accurate predictor of growth or change. Figure 1 has already shown that the locational variables seem to be of primary importance in accounting for these changes - certainly in the category below the Sub-Regional (Grade III) grade.

3. Table 2c also shows the variability in the growth rates over the seven grades of place between 1981 and 1986. Unlike the previous five years *the smaller centres have a greater range in variability* , with some places having population increases or decreases greater than 20% in the period. This is undoubtedly a function of their economic vulnerability as well as numbers. This trend can also be seen in Figure 2 which shows there is a general tendency for there to be a higher proportion of smaller service centres with changes over 10%. The uniformity of the trend is broken by the Regional (Grade II) nodes where three out of seven centres had increases above 10% namely: Edmonton's satellite centre of St. Albert, the new oil sands resource town of Ft. McMurray, and Red Deer which has seen the addition of several new industrial plants in its vicinity. The high proportions of young

families in all three centres has led to their continued absolute population growth. In addition, the Grade VI (large Local Service) centres also had lower proportions of places in the greater than 10% change category, at least as than expected from the general trend.

4. Emphasis upon the greater range of variability in the growth rates because of the revival of decline in so many of Alberta's settlements must not be allowed to disguise the fact that *most places changed by relatively small amounts between 1981-86*. During the decade 106 (47.3%) out of 224 incorporated places in these service centre categories only changed by less than 5% from their 1981 populations (25.4% with growth and 21.9% with decline). Perhaps the terms *stagnation or marginal decline* represent more useful descriptions of the changes - especially when compared to the real boom in so many places in Alberta during the 1970's. The contrast may be illustrated more starkly by noting that in 1981 only 29.7% had changes *within 10%* of the 1976 figures, whereas in 1986 an approximately similar proportion (31.7%) had changes *greater than 10%*, compared to the 68.3% of places lying within 10% of the 1981 population figures.

5. So far attention has focused upon variations in the population changes for each grade of place and the different numbers of incorporated settlements in each group. This means Table 2 does not provide a clear picture of the effect of all these changes upon the *absolute distribution of population within each grade of place*. Table 3 remedies this deficiency. It confirms the dominance of the larger centres in the province in the settlement pattern, with over 50% of the population in the two metropolitan centres, and another 10% in the Regional level nodes. In general the table shows the percentage of Alberta's population that is found in the various grades of place in 1986 is very similar to 1981. *This confirms that the changes from 1981-86 have not drastically altered the general distribution of population in the settlement hierarchy*. What change has occurred has marginally strengthened

the position of the largest places; in other words, the four largest grades, with the exception of the Sub-Regional category, now have a larger proportion of the Alberta population in 1986 compared to 1981. Again, however, the marginal nature of these changes must be emphasized, for they are below 1% in total.

Table 3 also shows the changes in terms of absolute population numbers for each grade of place between 1981 and 86. The largest increases are found in the Regional, District, Metropolitan centres respectively. All are above the provincial average of growth. The Sub-Regional and Large Local Service centres also show gains in the total number of people found at this grade, but they are marginally below the provincial growth average of 5.7%. The centres at the Grade V (Sub-District) category grew at approximately half (2.9%) the provincial average of growth, whilst the Local Service Centres (Grade VII) only marginally improved their position with a 0.39% gain. It must be noted that only three-quarters of the centres in this category are incorporated, but this general trend seems likely to be perpetuated - even when the unincorporated places are added to the group. The result is that the most recent history of population change in Alberta's settlements has been to enhance - marginally - the importance of the largest nodes, but by far less than average amounts for the Sub-District centres, and with the Grade VII centres virtually stagnating. This seems to confirm that the general trend of small centre stagnation and decline, so familiar in the five decades prior to 1970, has been re-established in Alberta. The statement must be qualified by appreciating that population decline did not occur in all small centres: there are zones of regional growth in the province in which these tendencies were contradicted.

The absence of population figures for unincorporated settlements must be emphasized, making it impossible to calculate the detailed changes in the Grade VIII (Minor Service) centres. It seems most unlikely that the principle of the general stagnation or even decline of many of the smaller nodes would be contradicted.

After all the total population in rural areas and unincorporated municipalities only amounted to 467,161 in 1981 compared to 1,898,664 in the incorporated settlements (Appendix 2). In total this is an increase of 1.3% in the proportion of the provincial population found in such areas, compared to an increase of 6.9% in the incorporporated settlements. Yet this slight absolute growth in the rural areas and unincorporated settlements must not be allowed to disguise the fact that these areas now only contain 19.7% of the provincial population a decline of -0.9% from the 1981 figure of 20.6%. These figures are marginally higher than the values showed in the totals column of Table 3. This table, however only deals with incorporated places in the first seven grades of the service centre hierarchy.

CONCLUSION

In mid April 1987 Statistics Canada published final 1986 population figures for incorporated places in the Prairie Provinces. This has enabled a review of the population changes in over 224 of the largest settlements in Alberta over the 1981-86 period. The study has shown that an approximate balance existed between the number of growing and declining settlements, although the scale of the changes were relatively small compared to the 1970's, for only 32% of the incorporated settlements had population increases or decreases above 10%. This situation of small fluctuations around the 1981 figures characterize most of the settlements, a very different pattern from the boom years of the 1970's. Within these minor variations it has been shown that the greatest variability and the greater losses have been suffered by the smaller service centres. However, the study of areal variations shows that grade of place does not appear to be the primary variable involved in accounting for the growth or decline of the smaller incorporated places. Figure 1 has shown that these are important spatial imbalances in the areas where growth and decline has taken place, a geographical variation would seem appropriate to be addressed by policy makers with the adoption of locationally specific policies. To some extent such policies already exist. Some of the areas in which the majority of smaller settlement have

declined already have local Economic Development Associations on the Regional Resources No. 1 model (Bodmer 1980) associations that are partially funded by government. It can be hypothesized that many more places in these areas would have declined without these attempts at grass-root economic stimulus, although a comprehensive impact analysis on their effectiveness would be needed to fully answer this point.

Appendix 1 Population Changes 1981-86: by Service Centre Grade

Appendix 2 Population Changes 1981-86: by Census Divisions and Incorporation

REFERENCES

Berry, B.J.L. (1976) Urbanization and Counter-Urbanization. Sage Publications, Beverly Hills, California.

Bodmer, H. (1980) Regional Resources Project No. 1. Plan Canada 20(2) pp. 81-91.

Boothroyd, P. (1971) Report of the Task Force on Urbanization and the Future. Government of Alberta.Counter-Urbanization: A Rural Perspective Geography, 70, pp. 13-23.

Cloke, P. (1985) Report of the Task Force on Urbanization and the Future. Government of Alberta.

Davies, W.K.D. (1986) The Differentiation of Alberta Service Centres in 1985. Unpublished report for Planning Services Division, Department of Municipal Affairs, Government of Alberta, October 1986.

Hodge, G.D. and Qadeer, M.A. (1983) Towns and Villages in Canada. Butterworths, Toronto.

Statistics Canada (April 1987) Final Population and Dwelling Counts for the 1986 Population Census (Incorporated Settlements only). Statistics Canada, Ottawa.

APPENDIX A

A-means adjusted boundaries. 1981 pop on A 86 boundaries

	SERVICE CENTRE	1971/81%	1976	1981	%1976/81	1981A	1986	%1981/86
		100=NO CHANGE			↓DECIMAL POINTS MISSING↓			
		121=+21%			115.31			105.90
	N. ALBERTA				↓			↓
4	1 EDMONTON	121	461594A	532246	11531	541992A	573982	10590
4	2 GRANDE PRAIRIE	186	17626	24263	13765	24263	26471	10910
4	3 SHERWOOD PK	0	0	0	0	0	0	0
4	4 ST ALBERT	271	24227A	31996	13207	31957A	36710	11487
	5 FORT MCMURRAY	453	15424	31000	20099	31000	34949	11274
	6 LLOYDMINSTER	190	5818	8997	15464	9011A	10201	11321
4	7 CAMROSE	145	10104	12570	12441	12570	12968	10317
4	8 WETASKIWIN	153	6766A	9597	14184	9601A	10071	10490
4	9 LEDUC	312	8594A	12471	14511	12471	13126	10525
	10 SPRUCE GROVE	341	6996A	10326	14760	10320A	11918	11548
	11 PEACE RIVER	117	4913A	5907	12023	5907	6288	10645
	12 EDSON	153	4058A	5835	14379	7139A	7323	10258
4	13 HINTON	170	6731	8342	12393	8349A	8629	10335
4	14 FORT SASKATCHEW	213	8430A	12169	14435	12169	11983	9847
	15 DRAYTON VALLEY	129	4378A	5042	11517	5042	5290	10492
	16 ST.PAUL	117	4351A	4884	11225	4888A	5030	10291
	17 WESTLOCK	136	3726A	4424	11873	4424	4532	10244
	18 BONNYVILLE	172	2948A	4454	15109	4471A	5470	12234
4	19 BARRHEAD	133	3003A	3736	12441	3756	3991	10683
4	20 PONOKA	118	4642A	5221	11247	5221	5473	10483
	21 VEGREVILLE	142	4209A	5251	12476	5264A	5276	10023
	22 GRANDE CENTRE	151	2800A	3146	11236	3146	3655	11618
	23 VERMILION	129	3208A	3766	11739	3766	3879	10300
4	24 ATHABASCA	98	1823A	1731	9495	1737A	1970	11341
4	25 WAINWRIGHT	110	3895A	4266	10953	4266	4665	10935
4	26 HIGH PRAIRIE	106	2364A	2506	10601	2537A	2817	10889
	27 MORINVILLE	316	2105A	4657	22124	4679A	5364	11464
	28 STONY PLAIN	273	479	600	12526	4839	5802	11990
	29 WHITECOURT	174	3878	5585	14402	5585	5737	10272
4	30 SLAVE LAKE	220	3561	4506	12654	4506	5429	12048
4	31 JASPER	0	0	0	0	0	0	0
4	33 NISKU	0	0	0	0	0	0	0
	32 FAIRVIEW	136	2273A	2869	12622	2869	2998	10450
	34 VALLEYVIEW	121	1716	2061	12010	2061	1987	9641
	35 HIGH LEVEL	136	1562	2194	14046	2194	3004	13692
4	36 MANNING	110	1058A	1173	11087	1168A	1144	9795
4	37 GRIMSHAW	135	1679A	2316	13794	2333A	2579	11054
	38 BEAVERLODGE	167	1371A	1937	14128	1950A	1808	9272
	39 LAC LA BICHE	112	1993A	2007	10070	2015A	2553	12670
	40 RIMBEY	116	1482A	1685	11370	1685	1786	10599
	41 DEVON	265	2786	3885	13945	3885	3691	9501
4	42 TOFIELD	163	1120	1504	13429	1504	1483	9860
4	43 PROVOST	110	1532	1645	10738	1645	1725	10486
	44 REDWATER	150	1494A	1932	12932	1932	1982	10259
	45 VIKING	105	1226A	1232	10049	1232	1160	9416
	46 TWO HILLS	122	946A	1193	12611	1193	1127	9447
4	47 SMOKY LAKE	122	932A	1074	11524	1074	1036	9646
4	48 SPIRIT RIVER	101	1020	1104	10824	1104	1086	9837
4	49 GRANDE CACHE	179	4116	4523	10989	4523	3646	8061
	50 MAYERTHORPE	142	1022A	1475	14432	1475	1414	9586
	51 SWAN HILLS	181	2012	2497	12411	2497	2403	9624
	52 ONOWAY	125	444	621	13986	651A	639	9816
4	53 ELK POINT	140	822A	1022	12433	1022	1318	12896
4	54 BASHAW	116	788A	875	11104	875	829	9474
	55 FALHER	120	1123A	1102	9813	1102	1178	10690
	56 LAMONT	174	1049A	1563	14900	1563	1576	10083
	57 GLENDON	121	370	430	11622	430	480	11163
	58 THORSBY	124	657	737	11218	737	632	8575
4	59 KILLAM	118	904A	1005	11117	1005	1032	10269
4	60 BOYLE	139	581A	638	10981	638	678	10627
	61 DAYSLAND	115	623A	679	10899	679	678	9985
	62 GIBBONS	413	1118A	2276	20358	2281A	2335	10237
	63 FORESTBURG	138	808	924	11436	929A	924	9946
	64 SEXSMITH	211	770	1180	15325	1180	1256	10644
4	65 HARDISTY	108	540A	641	11870	641	642	10016
4	66 ANDREW	118	486	548	11276	548	492	8978
	67 MCLENNAN	103	1133	1125	9929	1125	995	8827
	68 BEAUMONT	-99	851	2638	30999	2644A	3944	14917

APPENDIX A

A-means adjusted boundaries. 1981 pop on A 86 boundaries

	SERVICE CENTRE	1971/81%	1976	1981	%1976/81	1981A	1986	%1981/86
		100=NO CHANGE			↓DECIMAL	POINTS	MISSING	↓
4	69 FOX CREEK	154	1625	1978	12172	1978	2068	10455
	70 EVANSBURG	148	671	779	11610	791A	750	9482
	71 THORHILD	113	539A	576	10686	576	481	8351
	72 WARBURG	108	436A	501	11491	501	477	9521
4	73 MANNVILLE	122	681	788	11571	788	778	9873
4	74 BRETON	157	424	552	13019	552	466	8442
4	75 HYTHE	131	477A	639	13396	639	673	10533
	76 CALMAR	126	880A	1003	11398	1003	1087	10837
	77 COLD LAKE	161	1372A	2110	15379	2181A	3195	14649
	78 HOLDEN	96	408A	430	10539	430	411	9558
4	79 LEGAL	182	874	1022	11693	1022	881	8620
4	80 VILNA	114	348	345	9914	345	325	9420
	81 MUNDARE	118	557A	604	10844	604	545	9023
	82 MYRNAM	99	426A	397	9319	397	383	9647
	0 LA CRETE	0	0	0	0	0	0	0
	0 FT VERMILL	0	0	0	0	0	0	0
0	0 ARDROSSAN	0	0	0	0	0	0	0
0	0 NAMAO	0	0	0	0	0	0	0
	86 MILLET	246	762	1120	14698	1120	1520	13571
	88 RYCROFT	141	533	649	12176	649	672	10354
	89 SEDGEWICK	120	825	879	10655	879	877	9977
4	90 SANGUDO	111	417A	398	9544	398	391	9824
4	91 BERWYN	118	444A	557	12545	557	661	11867
4	92 HUGHENDEN	100	236	267	11314	267	249	9326
	93 BRUDERHEIM	325	527A	1136	21556	1136	1131	9956
4	94 EDGERTON	131	324	387	11944	387	400	10336
4	95 WEMBLEY	336	507	1169	23057	1176A	1208	10272
4	96 CLYDE	156	331A	364	10997	364	446	12253
4	97 PLAMONDON	137	228	259	11360	259	236	9112
4	98 RYLEY	113	432	483	11181	488A	500	10246
4	99 IRMA	112	432A	474	10972	474	484	10211
4	100 LOUGHEED	104	213	226	10610	226	268	11858
4	101 MARWAYNE	142	378A	500	13228	500	516	10320
4	102 NAMPA	118	286	334	11678	334	4640	138922
4	103 WABAMUN	-99	0	662	0	662	585	8837
4	104 HINES CREEK	131	503	575	11431	575	513	8922
4	105 NEW SAREPTA	206	249A	417	16747	417	314	7530
4	106 BON ACCORD	414	888A	1376	15495	1376	1355	9847
0	0 HOBBEMA	0	0	0	0	0	0	0
0	0 ASHMONT	0	0	0	0	0	0	0
4	109 WILDWOOD	114	360	441	12250	441	377	8549
4	110 INNISFREE	101	265	255	9623	257A	219	8521
4	111 ENTWISTLE	131	384A	462	12031	462	478	10346
4	112 RAINBOW LAKE	142	434	504	11613	504	675	13393
0	0 NITON JCT	0	0	0	0	0	0	0
0	0 PEERS	0	0	0	0	0	0	0
0	0 WINFIELD	0	0	0	0	0	0	0
4	113 ALBERTA BEACH	152	432	485	11227	493A	425	8621
0	0 FT CHIPEWAN	0	0	0	0	0	0	0
4	114 WASKATENAU	124	271	290	10701	290	276	9517
4	115 GIROUXVILLE	94	0	0	0	325	367	11292
0	0 JARVIE	0	0	0	0	0	0	0
4	118 EAGLESHAM	95	229	208	9083	208	197	9471
0	0 NEWBROOK	0	0	0	0	0	0	0
0	0 DEBOLT	0	0	0	0	0	0	0
4	120 ALLIANCE	90	228	208	9123	208	202	9712
4	117 DONNELLY	123	282A	336	11915	336	405	12054
4	125 KITSCOTY	155	397A	497	12519	497	631	12696
4	137 WAINHAM	99	255	266	10431	244A	233	9549
0	0 BLUE RIDGE	0	0	0	0	0	0	0
0	0 MALLAIG	0	0	0	0	0	0	0
0	0 CLAIRMONT	0	0	0	0	0	0	0
4	134 KINUSO	107	305	285	9344	285	282	9895
0	0 SMITH	0	0	0	0	0	0	0
0	0 WANDERG R	0	0	0	0	0	0	0
4	142 CZAR	76	184	148	8043	148	178	12027
4	121 CHAUVIN	85	296	298	10068	298	367	12315
0	0 WORSELEY	0	0	0	0	0	0	0
4	144 HAIRY HILL	0	96	72	7500	72	73	10139
0	0 ALDER FLAT	0	0	0	0	0	0	0
0	0 LA GLACE	0	0	0	0	0	0	0
0	0 BRUCE	0	0	0	0	0	0	0
0	0 ROCHESTER	0	0	0	0	0	0	0
4	146 RADWAY	113	190A	192	10105	192	162	8438
0	0 BUCK LAKE	0	0	0	0	0	0	0
4	148 STROME	124	227	281	12379	281	267	9502
4	124 HAY LAKES	143	242A	302	12479	302	294	9735
4	149 DERWENT	70	156	142	9103	142	149	10493

APPENDIX A

A-means adjusted boundaries. 1981 pop on A 86 boundaries

SERVICE CENTRE	1971/81%	1976 A	1981	%1976/81	1981A	1986	%1981/86
	100=NO CHANGE			↓DECIMAL POINTS		%ISSING	↓
4128 FORT ASSINIBOIN	120	187A	207	11070	207	214	10338
4126 WILLINGDON	113	308	366	11883	366	371	10137
0 TOMAHAWK	0	0	0	0	0	0	0
4152 AMISK	146	133	196	14737	196	212	10816
0 BROWNVALE	0	0	0	0	0	0	0
4154 HEISLER	107	200	212	10600	212	213	10047
0 MULHURST	0	0	0	0	0	0	0
4156 BAWLF	192	207	350	16908	350	375	10714
0 ELLERSLIE	0	0	0	0	0	0	0
4158 NEW NORWAY	146	286A	291	10175	291	278	9553
0 BLUFFTON	0	0	0	0	0	0	0
0 CALAHOO	0	0	0	0	0	0	0
0 KINSELLA	0	0	0	0	0	0	0
0 ARDMORE	0	0	0	0	0	0	0
0 SEBA BEACH	0	0	0	0	0	0	0
4164 DEWBERRY	102	161	163	10124	163	214	13129
0 GRASSLAND	0	0	0	0	0	0	0
0 DUFFIELD	0	0	0	0	0	0	0
0 COLINGTON	0	0	0	0	0	0	0
0 FAWCETT	0	0	0	0	0	0	0
4169 GALAHAD	35	0	0	0	152	190	12500
4170 ROSALIND	97	187	197	10535	197	214	10863
0 DARWELL	0	0	0	0	0	0	0
4172 CHIPMAN	147	296	266	8986	266	239	8985
4173 LAVOY	107	115	122	10609	122	126	10328
0 SUNNYBROOK	0	0	0	0	0	0	0
0 ROLLYVIEW	0	0	0	0	0	0	0
0 WESTEROSE	0	0	0	0	0	0	0
4177 EDBERG	103	140	150	10714	150	124	8267
0 CADOMIN	0	0	0	0	0	0	0
0 FAUST	0	0	0	0	0	0	0
4180 MINBURN	138	128A	146	11406	146	135	9247
4181 WARSPITE	0	92	96	10435	96	97	10104
4182 PARADISE VALLEY	123	148A	177	11959	183A	184	10055
0 KEG RIVER	0	0	0	0	0	0	0
0 ROUND HILL	0	0	0	0	0	0	0
0 ROCHFORT B	0	0	0	0	0	0	0
4186 FERINTOSH	122	135	155	11481	155	125	8065
0 ROBB	0	0	0	0	0	0	0
0 JOUSSARD	0	0	0	0	0	0	0
0 VIMY	0	0	0	0	0	0	0
0 CLANDONALD	0	0	0	0	0	0	0
0 BEAVALON	0	0	0	0	0	0	0
0 ISLAY	0	0	0	0	0	0	0
0 WOKING	0	0	0	0	0	0	0
0 CHERHILL	0	0	0	0	0	0	0
0 GUNN	0	0	0	0	0	0	0
0 OHATON	0	0	0	0	0	0	0
0 CANYON CR	0	0	0	0	0	0	0
0 PICKARDVIL	0	0	0	0	0	0	0
0 FABYAN	0	0	0	0	0	0	0
0 RANFURLY	0	0	0	0	0	0	0
0 SPEDDEN	0	0	0	0	0	0	0
0 HEINSBURG	0	0	0	0	0	0	0
0 VILLENEUVE	0	0	0	0	0	0	0
0 ALCOMDALE	0	0	0	0	0	0	0
0 MEETING CR	0	0	0	0	0	0	0
0 GWYNNE	0	0	0	0	0	0	0
0 ARMENA	0	0	0	0	0	0	0
0 BLACKFOOT	0	0	0	0	0	0	0
0 ST LINA	0	0	0	0	0	0	0
0 ST MICHAEL	0	0	0	0	0	0	0
SOUTH ALBERTA	147	471397A	592743	12574	592808A	636104	10730
5 1 CALGARY	131	47286A	54072	11435	54558A	58841	10785
5 2 LETHBRIDGE	168	32503A	46393	14273	46393	54425	11731
5 3 RED DEER	152	32838A	40380	12297	40700A	41804	10271
5 4 MEDICINE HAT	236	6387A	9421	14750	9439A	9464	10026
5 5 BROOKS	120	6154	6508	10575	6528A	6366	9752
5 6 DRUMHELLER	158	3680A	4698	12766	4698	5182	11030
5 7 ROCKY MOUNTAIN	126	5300A	5988	11298	6028A	6382	10587
5 8 TABER	123	4180A	5136	12264	5136	5147	10021
5 9 STETTLER	193	4034A	5591	13860	4845A	5096	10518
5 10 LACOMBE	179	3612A	4792	13267	5247	5535	10549
5 11 HIGH RIVER	212	2994A	5247	17525	3493	3382	9682
5 12 INNISFAIL	119	3281A	3493	10646	4813	4871	10121
5 13 CLARESHOLM	143	3697A	4813	13019	0	0	0
5 14 OLDS	0	0	0	0			
0 0 BANFF							

APPENDIX A

A-means adjusted boundaries. 1981 pop on 86 boundaries

SERVICE CENTRE	1971/81%	1976	1981	%1976/81	1981A	1986	%1981/86
	100=NO CHANGE			↓DECIMAL POINTS MISSING			↓
S 16 COALDALE	164	3667A	4579	12487	4651A	4796	10312
S 17 AIRDRIE	773	1414A	8414	59505	8414	10390	12343
S 18 CANMORE	227	2405A	3494	14486	3494	4182	12003
S 19 COCHRANE	339	1436A	3544	23849	3544	4190	11823
S 20 OKOTOKS	309	1815A	8832	48661	3847	5214	13553
S 21 PINCHER CREEK	116	3479A	3757	10799	3757	3800	10114
S 22 HANNA	110	2622A	2806	10702	2806	3017	10752
S 23 FORT MACLEOD	116	3057	3139	10235	3144A	3123	9933
S 24 CARDSTON	122	3063A	3267	10666	3267	3497	10704
S 25 STRATHMORE	260	1561	2936	19129	3014A	3544	11758
S 26 SYLVAN LAKE	237	1837	3779	20572	3783A	3937	10407
S 27 DIDSBURY	170	2158A	3095	14342	3097A	3134	10281
S 28 SUNDRE	187	1108A	1742	15722	1742	1712	9828
S 29ACROWSNEST PASS	-99	7286A	7306	10027	7302A	6912	9466
S 30 THREE HILLS	132	1569A	1787	11389	2573A	2528	9825
S 31 VULCAN	108	1450A	1489	10269	1495A	1420	9498
S 32 NANTON	166	1158A	1641	14171	1641	1562	9519
S 33 CORONATION	149	1199	1309	10927	1309	1310	10008
S 34 BASSANO	139	999	1200	12012	1200	1186	9883
S 35 REDCLIFF	172	3006	3878	12901	3876	3834	9392
S 36 CARSTAIRS	180	1069A	1587	14846	1587	1629	10265
S 37 CASTOR	96	1207	1123	9304	1123	1030	9172
S 38 MAGRATH	130	1315	1576	11985	1576	1637	10387
0 0 COLEMAN	0	0	0	0	0	0	0
S0400BOW ISLAND	129	1296	14910	11505	1491	1650	11066
S 41 ECKVILLE	132	781A	870	11140	871A	853	9793
S 42 CROSSFIELD	191	777	1217	15663	1224A	1402	11454
S 43 PICTURE BUTTE	139	1164	1404	12062	1409A	1576	11185
S 44 OYEN	105	962	975	10135	975	979	10041
S 45 VAUXHALL	103	434	477	10991	1049	991	9447
S 46 RAYMOND	132	2290	2837	12389	2837	2957	10423
S 47 TROCHU	119	767A	880	11473	880	892	10136
S 48 TURNER VALLEY	171	1132	1311	11581	1311	127	969
S 49 MILK RIVER	115	317A	894	28202	894	861	9631
S 50 BENTLEY	133	730	823	11274	831A	841	10120
S 51 BEISEKER	140	496	580	11934	582A	503	8643
S 52 CONSORT	96	609	632	10378	632	674	10665
S 53 ALIX	148	673A	837	12437	837	793	9474
S 54 BLACKFALDS	165	1065A	1488	13972	1488	1688	11344
S 55 BLACK DIAMOND	153	1252A	1444	11534	1444	1486	10291
S 56 FOREMOST	100	539A	568	10538	568	595	10475
S 57 DELBURNE	150	417	574	13765	574	577	10052
0 0 BRAGG CREEK	0	0	0	0	0	0	0
S 59 CAROLINE	129	395A	436	11038	436	364	8349
S 60 ACME	152	351	457	13020	468A	457	9765
S 61 PENHOLD	339	773	1531	19806	1531	1580	10320
S 62 CARBON	127	435	434	9977	434	429	9885
0 0 BELLEVUE	0	0	0	0	0	0	0
S 64 BOWDEN	423	661	989	14962	991A	967	9758
0 0 WATERTON	0	0	0	0	0	0	0
S 66 LINDEN	180	301A	407	13522	407	417	10246
S 67 COUTTS	98	387	400	10336	400	359	8975
S 68 WARNER	117	434	477	10991	477	435	9119
S 69 STAVELY	144	432	504	11667	504	454	9008
S 70 DUCHESS	188	350A	429	12257	429	430	10023
S 71 LONGVIEW	159	198	301	15202	301	276	9169
S 72 ROCKYFORD	115	276	329	11920	329	293	8906
S 73 VETERAN	118	279	314	11254	314	312	9936
S 74 BLACKIE	177	228A	298	13070	298	266	8926
S 75 MIRROR	139	335	507	15134	507	508	10020
S 76 COWLEY	151	284	304	10704	304	290	9539
S 77 BARONS	133	283	315	11131	315	290	9206
S 78 GLEICHEN	104	339	381	11239	381	327	8583
0 0 LANGDON	0	0	0	0	0	0	0
S 80 LOMOND	109	182	180	9890	180	177	9833
S 81 TILLEY	128	329	345	10486	345	352	10203
S 82 DONALDA	121	198	280	14141	280	249	8893
S 82 STANDARD	142	305	379	12426	379	331	8734
S 84 DELIA	88	232	211	9095	211	208	9858
0 0 PINE LAKE	0	0	0	0	0	0	0
S 86 NOBLEFORD	133	417	534	12806	534	531	9944
S 87 BIG VALLEY	118	344	360	10465	361A	295	8172
S 88 TORRINGTON	160	189A	189	10000	189	209	11058
S 89 CARMANGAY	116	263	266	10114	266	240	9023
S 90 GRASSY LAKE	103	151	201	13311	201	235	11692
S 91 HUSSAR	103	339	381	11239	175	167	9543
S 92 CEREAL	113	231	249	10779	249	243	9759
S 93 CHAMPION	101	300	339	11300	339	350	10324
S 94 ARROWWOOD	94	145	156	10759	156	137	8782
S 95 IRVINE	186	221	360	16290	360	301	8361

APPENDIX A

A-means adjusted Boundaries. 1981 pop on 86 boundaries

SERVICE CENTRE	1971/81%	1976	1981	%1976/81	1981A	1986	%1981/86
	100=NO CHANGE			↓DECIMAL POINTS		MISSING	↓
96 CREMONA	205	314A	362	11529	382	356	9319
0 0 LAKE LOUISE	0	0	0	0	0	0	0
5 98 COALHURST	-99	473A	882	13647	885A	1252	14147
5 99 IRRICANA	401	264	558	21136	558	669	11989
0 SPRUCE VIEW	0	0	0	0	0	0	0
0 ROLLING HILLS	0	0	0	0	0	0	0
5102 GRANUM	123	413	399	9661	399	352	8822
5103 ELNORA	117	229A	249	10873	256A	245	9570
0 0 CARSELAND	0	0	0	0	0	0	0
105 YOUNGSTOWN	97	272	297	10919	294A	294	10000
106 ROSEMARY	158	273	328	12015	328	321	9787
107 MILO	85	89	100	11236	100	117	11700
5108 EMPRESS	75	238	200	8403	200	229	11450
0 0 LESLIEVILLE	0	0	0	0	0	0	0
0 0 SHAUGHNESY	0	0	0	0	0	0	0
0 WIMBOURNE	0	0	0	0	0	0	0
0 ENCHANT	0	0	0	0	0	0	0
0 MANYBERRYS	0	0	0	0	0	0	0
5114 CLUNY	0	95	92	9684	92	95	10326
0 0 BENALTO	0	0	0	0	0	0	0
5116 HALKIRK	115	152	156	10263	156	143	9167
0 DEWINTON	0	0	0	0	0	0	0
118 BURDETT	107	214	220	10280	220	278	12636
119 STIRLING	158	543	688	12670	688	796	11570
4120 BARNWELL	-99	158A	359	22722	365A	402	11014
0 0 ROSEDALE	0	0	0	0	0	0	0
122 CLIVE	147	254	364	14331	364	356	9780
0 MTN VIEW	0	0	0	0	0	0	0
0 LUNDBRECK	0	0	0	0	0	0	0
0 DUNMORE	0	0	0	0	0	0	0
0 0 MILLARVIL	0	0	0	0	0	0	0
0 0 HILL CREST	0	0	0	0	0	0	0
0 FRANK	0	0	0	0	0	0	0
0 STANDOFF	0	0	0	0	0	0	0
0 IRON SPRING	0	0	0	0	0	0	0
5131 BOTHA	174	133	172	12932	172	180	10465
5132 CAYLEY	159	156	194	12436	194	202	10412
5133 GLENWOOD	130	199	259	13015	259	304	11737
0 HILDA	0	0	0	0	0	0	0
0 0 ACADIA VALLEY	0	0	0	0	0	0	0
0 0 CONDOR	0	0	0	0	0	0	0
5137 GADSBY	0	43	47	10930	47	35	7447
0 0 ERSKINE	0	0	0	0	0	0	0
0 0 EXSHAW	0	0	0	0	0	0	0
0 0 DIAMOND CITY	0	0	0	0	0	0	0
0 0 BROCKET	0	0	0	0	0	0	0
0 0 ETZIKOM	0	0	0	0	0	0	0
5143 MORRIN	124	230	244	10609	244	252	10328
5144 RUMSEY	0	85	87	10235	87	70	8046
0 0 NACMINE	0	0	0	0	0	0	0
0 0 SHALWELL	0	0	0	0	0	0	0
0 0 EAST COULEE	0	0	0	0	0	0	0
0 0 WRENTHAM	0	0	0	0	0	0	0
0 0 TURIN	0	0	0	0	0	0	0
0 0 HAYS	0	0	0	0	0	0	0
5151 HILL SPRING	94	175	200	11429	200	243	12150
0 0 PINCHER STN	0	0	0	0	0	0	0
0 0 ELKWATER	0	0	0	0	0	0	0
0 0 COMPEER	0	0	0	0	0	0	0
0 0 GULL LAKE	0	0	0	0	0	0	0
0 0 MADDEN	0	0	0	0	0	0	0
0 0 HUXLEY	0	0	0	0	0	0	0
0 0 SPRING COU	0	0	0	0	0	0	0
0 0 MOSSLEIGH	0	0	0	0	0	0	0
0 0 RALSTON	0	0	0	0	0	0	0
0 0 WALSH	0	0	0	0	0	0	0
0 0 CRAIGMYLE	0	0	0	0	0	0	0
0 0 SIBBALD	0	0	0	0	0	0	0
0 0 ALTARIO	0	0	0	0	0	0	0
0 0 BYEMOOR	0	0	0	0	0	0	0
0 0 WESTWARD H	0	0	0	0	0	0	0

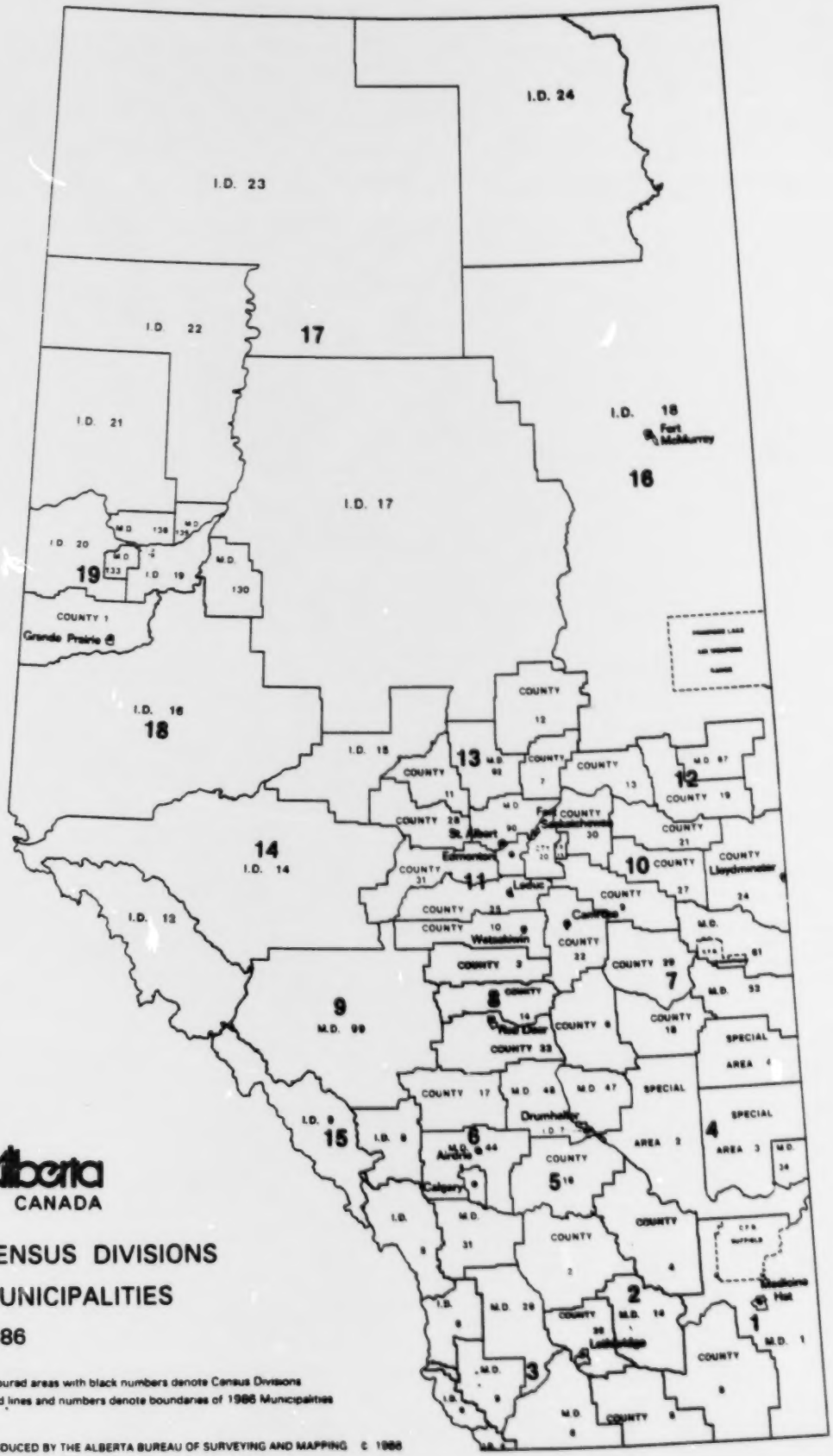
OPULATION FIGURES FOR UNINCORPORATED PLACES/SUMMER VILLAGES ARE NOT SHOWN.

Appendix B

1981 - 1986
ALBERTA POPULATION CHANGE BY CENSUS DIVISION

Census Division	Year	Total Pop.	% Change 1981-86	Incorporated Population (%)	% Change 1981-86	Unincorporated & Rural Pop. (%)	% Change 1981-86
Division 1	1981	55375	+2.2	47215 (85.3)	+2.6	8160 (14.7)	-0.4
	1986	56592		48462 (85.6)		8130 (14.4)	
Division 2	1981	110477	+4.8	87032 (78.8)	+6.2	23445 (21.2)	-0.7
	1986	115739		92467 (79.9)		23272 (20.1)	
Division 3	1981	35656	-1.9	18544 (52.0)	+0.5	17112 (48.0)	-4.6
	1986*	34970		18644 (53.3)		16326 (46.7)	
Division 4	1981	12119	+2.1	5470 (45.1)	+5.1	6649 (54.9)	-0.3
	1986	12376		5748 (46.4)		6628 (53.6)	
Division 5	1981	38382	+1.1	19075 (49.7)	+0.5	19307 (50.3)	+1.7
	1986	38805		19178 (49.4)		19627 (50.6)	
Division 6	1981	668682	+7.0	630991 (94.4)	+7.6	37691 (5.6)	-2.4
	1986*	715605		678821 (94.9)		36784 (5.1)	
Division 7	1981	40071	+1.5	21477 (53.6)	+2.3	18594 (46.4)	+0.7
	1986	40681		21962 (54.0)		18719 (46.0)	
Division 8	1981	108617	+7.4	76170 (70.1)	+12.6	32447 (29.9)	-4.9
	1986*	116611		85751 (73.5)		30860 (26.5)	
Division 9	1981	15025	+6.5	5134 (34.2)	+8.0	9891 (65.8)	+5.7
	1986	15999		5546 (34.7)		10453 (65.3)	
Division 10	1981	78425	+1.7	45667 (58.2)	+3.2	32758 (41.8)	-0.5
	1986	79745		47139 (59.1)		32606 (40.9)	
Division 11	1981	762033	+6.0	651664 (85.5)	+6.5	110369 (14.5)	+2.9
	1986	807504		693993 (85.9)		113511 (14.1)	
Division 12	1981	40648	+8.0	17943 (44.1)	+16.4	22705 (55.9)	+1.4
	1986*	43907		20882 (47.6)		23025 (52.4)	
Division 13	1981	53701	+2.4	19983 (37.2)	+3.4	33718 (62.8)	+1.8
	1986	54973		20655 (37.6)		34318 (62.4)	
Division 14	1981	24635	+2.7	16720 (67.9)	+2.2	7915 (32.1)	+4.0
	1986	25309		17079 (67.5)		8230 (32.5)	
Division 15	1981	21666	+5.2	10786 (49.8)	+2.9	10880 (50.2)	+7.5
	1986*	22794		11094 (48.7)		11700 (51.3)	
Division 16	1981	43573	+11.9	33274 (76.4)	+13.4	10299 (23.6)	+7.2
	1986*	48779		37738 (77.4)		11041 (22.6)	
Division 17	1981	44063	+10.9	14660 (33.3)	+14.1	29403 (66.7)	+9.2
	1986	48852		16731 (34.2)		32121 (65.8)	
Division 18	1981	14476	-6.1	8562 (59.1)	-10.1	5914 (40.9)	-0.5
	1986	13587		7701 (56.7)		5886 (43.3)	
Division 19	1981	70100	+4.1	45967 (65.6)	+6.8	24133 (34.4)	-0.9
	1986	72997		49073 (67.2)		23924 (32.8)	
Total for Alberta	1981	2237724	+5.7	1776334 (79.4)	+6.9	461390 (20.6)	+1.3
	1986	2365825		1898664 (80.3)		467161 (19.7)	

* Division contains one or more incompletely enumerated Indian Reserve or Settlement.



Alberta
CANADA

CENSUS DIVISIONS
MUNICIPALITIES
1986

Coloured areas with black numbers denote Census Divisions
Solid lines and numbers denote boundaries of 1986 Municipalities

PRODUCED BY THE ALBERTA BUREAU OF SURVEYING AND MAPPING © 1986